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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,168	01/13/2004	Gunter Hintenlang	8470G-000004	2113

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EXAMINER
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PATEL, VISHAL A

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/756,168

Applicant(s)

HINTENLANG ET AL.

Examiner

Vishal Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 15 and 16 are not in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: The specification does not describe reference numerals 15 and 16 of the figure.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claim 1 recites the limitation "the first centering ring" in line 12. There is insufficient antecedent basis for this limitation in the claim. For examination purpose the first centering ring is considered to be the first sealing lip.

5. Claim 10 recites the limitation "the axial projection" in line 1. There is insufficient antecedent basis for this limitation in the claim. For examination purpose the first centering ring is considered to be the first sealing lip.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-8 and 10 rejected under 35 U.S.C. 102(b) as being anticipated by Nagasawa (US. 4,623,153).

Claims 1-4, 6-8 and 10 by figure 4:

Regarding claim 1: Nagasawa a sealing ring (sealing ring of figure 3) comprising a supporting ring (6') connected with a first sealing lip (1 having a lip 2) made of an elastomeric material and a second sealing lip (4) made of a polymeric material. The second sealing lip being wedged against the supporting ring by a clamping plate (9) without being bound to it. The clamping plate for purposes of precentered installation of a machine element (shaft 8) that is to be sealed into the sealing lip, the clamping plate being provided with an insertion slant (9a) that projects axially in a direction opposite to that of an installation direction of the machine element (the slant 9a is opposite of the installation direction of the shaft installation because as described

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in column 6, lines 10-20, the seal ring is mounted on the housing and the shaft is moving to the left in figure 3 because the lip 2 forms a seal against fluid in the housing) and of the first sealing lip (the tapered portion 9a is opposite a tapered portion at the distal end of the lip 2 and after 2a), and having a diameter that increases in funnel-like (this would be the case since the tapered portion 9a is annular) fashion axially in the direction opposite to the installation direction and to the first sealing lip. The second sealing lip acts as a second centering ring for further precentered installation of the machine element and being located after the first sealing lip in the installation direction, and acting as preliminary seal for the first sealing lip (this would be the case since the shaft is installed by moving the shaft toward the left).

Regarding claim 2: The first sealing lip is precurved (where 1 contacts the lip 4) in the installation direction and axially in the direction of the space to be sealed (the precurved is in the installation direction since the precurved is curved upward and to the left).

Regarding claim 3: The second sealing lip is made of PTFE and is precurved in the installation direction and axially in the direction of the first sealing lip (this is the case since both lips are curved in the same direction).

Regarding claim 4: The supporting ring is essentially T-shape (T-shape formed by 6a', 6b', 6c', 7' and 7a') and is provided with a radial leg to which the first sealing lip is fixed (radial leg 7a').

Regarding claim 6: The supporting ring is surrounded on its outer periphery by a static loaded seal (static loaded seal 1b).

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Regarding claims 7-8: The static seal is made of elastomeric material. The static seal forms a single piece with the first sealing lip (1b and 1 are formed as one piece) and can be made of the same material as the lip.

Regarding claim 10: The clamping ring is pressed into the axial projection of the supporting ring with its radial outer axial leg (radial outer leg of 9 that is in contact with 6d'). The clamping ring is made of metal.

Claims 1 and 4-5 are rejected by figure 6.

Regarding claim 1: Nagasawa a sealing ring (sealing ring of figure 6) comprising a supporting ring (6) connected with a first sealing lip (1 having a lip 2) made of an elastomeric material and a second sealing lip (4) made of a polymeric material. The second sealing lip being wedged against the supporting ring by a clamping plate (9) without being bound to it. The clamping plate for purposes of precentered installation of a machine element (shaft 8) that is to be sealed into the sealing lip, the clamping plate being provided with an insertion slant (9a) that projects axially in a direction opposite to that of an installation direction of the machine element (the slant 9a is opposite of the installation direction of the shaft installation because as described in column 6, lines 10-20, the seal ring is mounted on the housing and the shaft is moving to the left in figure 3 because the lip 2 forms a seal against fluid in the housing) and of the first sealing lip (the tapered portion 9a is opposite a tapered portion at the distal end of the lip 2 and after 2a), and having a diameter that increases in funnel-like (this would be the case since the tapered portion 9a is annular) fashion axially in the direction opposite to the installation direction and to the first sealing lip. The second sealing lip acts as a second centering ring for further precentered installation of the machine element and being located after the first sealing lip in the installation

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direction, and acting as preliminary seal for the first sealing lip (this would be the case since the shaft is installed by moving the shaft toward the left).

Regarding claims 4-5: The supporting ring is essentially T-shape (T-shape formed by 6, 6b, 7 and 7a) and is provided with a radial leg (7a) to which the first sealing lip is fixed (radial leg 7a). The radial leg (7a) is completely enveloped by the elastomeric material of the first sealing lip.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatch (Us. 6,367,810) in view of Giles (US. 2,264,970).

Hatch discloses a sealing ring (sealing ring of figure 2) comprising a supporting ring (58) connected with a first sealing lip (71) made of an elastomeric material and a second sealing lip (59) made of a polymeric material. The second sealing lip being wedged against the supporting ring by a clamping plate (64) without being bound to it. The clamping plate for purposes of precentered installation of a machine element (shaft 55) that is to be sealed into the sealing lip, the clamping plate being provided with an insertion end (end of 65 or 66) in a direction opposite to that of an installation direction of the machine element (the insertion end 65 and 66 are on opposite of the insertion direction of the machine element because the shaft is inserted to the left of the page since the figure 2 so that the lip 71 and 59 are bent or deformed by the shaft) and of

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the first sealing lip (the ends are opposite of the first sealing lip). The second sealing lip acts as a second centering ring for further precentered installation of the machine element and being located after the first sealing lip in the installation direction, and acting as preliminary seal for the first sealing lip (this would be the case since the shaft is installed by moving the shaft toward the left). The clamping plate is axially open in the direction opposite to that of installation (the clamping plate is open in the direction opposite to that of installation). Hatch disclose the invention substantially as claimed above but fail to disclose that the clamping plate has an insertion slant having a diameter that increases in funnel-like fashion axially and the clamping plate is C-shape. Giles discloses a clamping ring that has an insertion slanted (30) that increases in funnel-like fashion axially and having a C-shape (where 27a, 26a and 30 form a C-shape). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the clamping ring of Hatch by the clamping ring of Giles to provide a reinforced clamping ring (page 1, column 2, lines 45-47 of Giles).

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasawa.

Nagasawa discloses the claimed invention except for the metal to be spring steel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to having the clamping ring to be formed of spring steel, since it has been held to be within the general skill of a worker in the art to select a know material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kobayashi et al, Ikeda et al, Kershaw, McKinven, Jr., Filho and Jamman.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is (703) 308-8495. The examiner can normally be reached on Monday through Friday from 7:30 PM to 4:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann, can be reached on (703) 306-4115.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168. Technology Center 3600 Customer Service is available at 703-308-1113. General Customer Service numbers are at 800-786-9199 or 703-308-9000. Fax Customer Service is available at 703-872-9325.

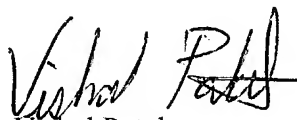
**Any response to this action should be mailed to:**

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Washington, D.C. 20231

**or faxed to:** 703-872-9326, for formal communications for entry before Final action: or,  
703-872-9327, for formal communications for entry after Final action.

Hand-delivered responses should be brought to Crystal Park Five, 2451 Crystal Drive, Arlington, Virginia, Seventh Floor (Receptionist suite adjacent to the elevator lobby).

VP  
August 7, 2004

  
Vishal Patel  
Patent Examiner  
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